

Hydraulic Service & Repair

Hydraulic service and repair involves the rebuilding and repair of hydraulic equipment, a rapidly growing segment of the fluid power industry. Due to the increased complexity of hydraulic components and circuits on both mobile and industrial machinery, special skills and knowledge are required to rebuild the hydraulic components. Employers include component manufacturers, original equipment manufacturers, distributors, rebuilders, and virtually all manufacturing firms.

Pursuing Hydraulic Service and Repair at Ohio State ATI

Ohio State ATI recommends that students entering the field of hydraulic service and repair pursue a college preparatory curriculum and have an aptitude toward mathematics and mechanical skills. A vocational education background may be helpful when working with mechanical and other aspects of the program.

Students seeking a certificate of completion in hydraulic service and repair enter directly into the program upon completion of their admission requirements. All applicants are strongly advised to arrange a pre-admission in order to acquaint themselves with the various aspects of this program of study.

The hydraulic service and repair curriculum includes the study of hydraulic power transmission, the properties of hydraulic fluids, and their ability to convey power. Repair and maintenance of fluid power system components and troubleshooting of fluid power systems are also part of this curriculum.

This program requires that 34 percent of the credits be earned in the general studies of science, math, communications, physics, and social science. Courses such as written expression, technical math, and economics are offered in general studies.

Technical instruction includes course work in fundamentals of Fluid Power, methods of power transmission, Fluid Power components, microcomputers, DC electricity and basic electronics, fluid conveyance, fluids and filters, metal manufacturing, and instrumentation/troubleshooting.

To obtain the Certification of Completion in Hydraulic Service and Repair from Ohio State ATI, students must complete a minimum of 45 quarter credit hours with a cumulative point-hour ratio of 2.0 or above. They must satisfactorily complete a prescribed curriculum which

includes at least 31 quarter credit hours in technical studies and 16 quarter credit hours in basic and general studies.

Students in the hydraulic service and repair program complete five quarter credit hours of practicum, a supervised, practical, on-campus work experience which provides students the opportunity to apply the skills they have learned in class.

Career Prospects in Hydraulic Service and Repair

Graduates earning the Certificate of Completion in Hydraulic Service and Repair can enter the work force as maintenance personnel, system assemblers, component rebuilders, or test technicians.

Graduates of this program will be highly effective employees for firms with off-road machinery that utilizes hydraulics, including the agriculture, construction, and mining industries. Employment opportunities also exist with firms who specialize in the repair or rebuilding of hydraulic components. Because rebuilding is often more cost effective and quicker than buying new components, many large industrial users and manufacturers seek individuals with these skills for maintenance positions. Most industrial plants and mobile equipment owners elect to rebuild their hydraulic and pneumatic equipment because of the complications often experienced in obtaining replacement pumps, valves, motors, and cylinders, and due to the high cost of these items.

Beginning salaries for hydraulic service and repair technicians range from \$18,000 to \$24,000 annually, depending on the specific skills and other factors determined by various employers.

Related Programs

Students who are planning to pursue an associate's degree might be more interested in our Associate of Applied Science in Hydraulic Power and Motion Control curriculum.

Opportunities for Outstanding Students

Each spring, the Outstanding Student Banquet recognizes the top student in each major or technology. Ohio State ATI also has a chapter of Phi Theta Kappa, the international honor society for students at two-year institutions. Selection for this prestigious society is based upon academic achievement and leadership qualities. Students with cumulative grade point averages of between 3.7 and 4.0 are eligible to graduate with Latin honors (summa cum laude, magna cum laude, or cum laude).

For more information, check these web sites:

Hydraulic Service and Repair Program:

www.ati.osu.edu/programs

Ohio State ATI: www.ati.osu.edu

Ohio State: www.osu.edu

Admissions: www.ATIadmissions.osu.edu

Visit ATI: www.ati.osu.edu/visit_campus.html

Curriculum Sample

Year One:

Autumn Quarter

Fundamentals of Fluid Power	3
Practicum (Shop Skills)	2
Personal and Career Orientation	1
First-Year Written Composition	3
Technical Mathematics	5
Introduction to Microcomputer Applications	1

Winter Quarter

Fluid Power Components	3
Methods of Power Transmission	3
Technical Math II	5
Technical Elective	3
Business Elective	3

Spring Quarter

Basic Electricity and Electronics	3
Welding and Metal Fabrication	4
Fluid Conveyance, Fluids, and Filters	3
Practicum (Component Rebuilding)	3
Social Science Elective	3
Total hours	48

About Ohio State ATI

Ohio State ATI, located in Wooster, Ohio, is ranked number one in the nation in the awarding of associate degrees in agriculture and related sciences and is the associate-degree granting unit of The Ohio State University College of Food, Agricultural, and Environmental Sciences. Twenty-five technical programs leading to the Associate of Applied Science or Associate of Science degree are offered at the Wooster campus. Two Certificate of Competency programs, in hydraulic service and repair and commercial turf equipment, are also offered. Within four months of graduation, 99% of Ohio State ATI graduates are employed or pursuing bachelor's degrees.

Ohio State ATI's 50-acre central campus features classroom and laboratory buildings, horticultural facilities, the student activities center, residence hall, and Applewood Village student apartments. A 1700-acre farm laboratory is located five miles east of the central campus.

Halterman Hall houses classrooms, the Library Learning Resource Center, computer labs, administrative and faculty offices, as well as specialized laboratory facilities for chemistry, physics, entomology, biology, botany, soils, floral design, and landscape classes.

Adjacent to Halterman Hall is Skou Hall, home to classrooms, academic offices, and laboratories for animal, dairy, and equine sciences and turfgrass management. Skou Hall also houses engine, electronics, construction, and Fluid Power classes, and contains the Ohio State ATI Bookstore, Café Carmen, a student lounge, and the office of Student Success Services, which provides career and personal counseling, tutoring, study groups, disability services, and other support services to students.

Ohio State ATI's greenhouse complex, tropical plant conservatory, and numerous outdoor gardens assure that the campus is blooming and beautiful year-round.

Ohio State ATI's student activities center features a weight room, game room, gymnasium, and racquetball courts and coordinates activities and events sponsored by student clubs. An active intramural sports program makes use of ATI's multi-purpose athletic field.

The Ohio State ATI residence hall features fully-furnished efficiency apartments that include a kitchenette and full bath. The Applewood Village student apartments are fully-furnished one-, two-, or three-bedroom townhouses. Both the residence hall and apartment village are air conditioned and include utilities, cable TV, and Internet access. Parking is free on the ATI campus.

Revised July 2005

Contact information:

The Ohio State University Agricultural Technical Institute
Office of Admissions | 1328 Dover Road | Wooster, Ohio 44691-4000
(330) 264-3911 ext. 1327 | Toll free in Ohio 1-800-OH-STATE